Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

PSYCHOLOGIE DES GRANDS CALCULATEURS ET JOUEURS D'ÉCHECS. By *Alfred Binet.* Paris: Hachette & Co. 1894. Pp. 364.

For several years M. Binet has been making experimental researches on the different forms of memory with the idea of producing something useful to pedagogy. The present work in which the partial results of his studies are published is divided into two parts, the first of which treats of the great mental arithmeticians and their work, and the second of the psychology of chess-players, especially of blindfold players After a brief historical *résumé* of the subject of arithmetical prodigies, M. Binet takes up the case of Jacques Inaudi, a renowned mental calulator born in 1867, now giving public exhibitions in France. It is impossible with our limited space to give a full account of the data recorded by M. Binet. We shall limit ourselves to a few results which he claims as new.

The case of M. Inaudi, M. Binet claims, furnishes us with a fresh contribution to the theory of partial memories. In M. Inaudi, as in all arithmetical prodigies, the memory for figures is abnormally developed, the other memories not. But exactly here an important distinction is established by M. Binet's researches; the distinction, namely, of the *acquisitive* power of memory and of the *extent* of memory. The acquisitive power of memory refers to the maximum number of figures that can be repeated after a *single* hearing; the extent of memory to the number of figures that can be preserved in the memory after *several* hearings. Although M. Inaudi after several hearings could retain in his memory three hundred figures and with great effort four hundred, yet he could only repeat forty-two from having the figures read once. M. Inaudi is a perfect type of auditive memory. In his memory of figures he does not use number-forms or visual imagery of any kind; he remembers figures principally by their sounds. M. Inaudi's methods of calculation are original, and slightly different from the traditional methods. In subtraction he begins at the left, always operating with groups of three figures. His fundamental method is multiplication. To divide and to extract roots he multiplies, which for mental calculations, if one knows that whole numbers are required, is certainly the easiest course and that universally employed by good arithmeticians. In performing multiplications he breaks up his multipliers and multiplicands into lesser numbers, and after performing the resultant simpler multiplications adds the results. For example, to multiply 325 by 638 he multiplies 300 and 25 each by 600, by 30, and by 8, adding the totals. The problems which M. Inaudi solves are of the stereotyped class. The most difficult are of this order. Find four squares the sum of which is 13,411. M. Inaudi gave his first solution in three minutes, his second a minute after the first, and shortly after that a third solution. The secret of M. Inaudi's performances consists chiefly in his wonderful partial memory for figures, and not in any exceptional mathematical power. Comparative experiments were made with the professional accountants of the Bon Marché with the result that M. Inaudi is not more rapid in simpler computations than the professional accountants, but only in the larger ones which require a great span of memory.

The case of M. Diamandi, a second calculator, offers nothing remarkable; his type is the visual type; he performs multiplications by memory of position. In two chapters which conclude this part of the book M. Binet gives us an interesting discussion of visual and auditive memory, as also of "the simulation of memory" or apparent memory. With respect to this last his conclusion is that no importance is to be attached to the number of figures which a person retains at any given moment in his memory and which he can repeat without error; a person versed in mnemotechny can recite and repeat an indefinite number of figures, as also learn and repeat an indefinite number of figures recited to him. From a review of their family histories, early condition, and environment, M. Binet concludes that arithmetical prodigies form a true natural group, the distinctive characteristics of which are as follows: no hereditary influence, nor influence of environment; low birth; abnormal precocity; the aptitude for computation manifests itself in the child when still illiterate; the absorption of the whole mind by figures; and finally the aptitude in question is developed by exercise and diminishes rapidly by disuse.

The discussions and experiments relating to chess-playing generally and to blindfold chess in particular, are full of information, though the results are what one would naturally expect. Three elements are predominant in blindfold chess: erudition, memory, and imagination. The significance of erudition is evident. The memory referred to is the memory of recapitulation; the going over of old plays and the forecasting of new ones. The imagination referred to would be called in technical psychology "visualisation" and refers to images of fixed positions and of possible movements. These images M. Binet calls visual geometrical images, and claims to have described for the first time this special form of the visual memory. μ.

AUGUST COMTE ET HERBERT SPENCER. Contribution à l'histoire des idées philosophiques au XIX. siècle. By *E. de Roberty*. Paris: Félix Alcan. Pp., 200. Price, 2 frs. 50.

In that great flux of ideas and systems, the aim of which is to fix beliefs and convictions, says M. Roberty, two great conflicting movements have existed from time out of mind: monism and agnosticism. In the infancy of philosophy this conflict was normal. To-day it presents certain pathological aspects. The spirit of synthesis has exhausted itself in attempts to blend and reconcile these opposing views, but in vain. The philosophy of the nineteenth century follows in the beaten paths of the metaphysics which preceded it,—a metaphysics modelled upon the monotheistic traditions of the higher religions. It unites, unconsciously and irrationally, the quest for unity with the old inherent dualism of knowledge, reviving the most dangerous and disgraceful of fallacies.

In previous works of his, *L'agnosticisme* and *La recherche de l'unité*, both mentioned in *The Monist*, M. Roberty has pointed out some characteristic features of this fundamental antinomy of human thought. The very effort after a universal